METHODS TO TREAT UNDESIRABLE IMMUNE RESPONSES

been considered by the Examiner, had not been returned to Applicant's Representatives. For the Examiner's convenience, a copy of this Form is enclosed herewith. Applicant respectfully requests that a copy of Form 1449 submitted with Information Disclosure Statements on July 26, 2001, marked as being considered and initialed by the Examiner, be returned with the next official communication.

The Examiner rejected claims 1-13, 16-18, 31, 34-39, and 41-43 under 35 U.S.C. § 112, second paragraph. The amendments to claims 1, 2 and 17 render this rejection moot. Accordingly, withdrawal of the § 112(2) rejection is respectfully requested.

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-373-6959) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By her Representatives.

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal with sufficient postage as first class mail, in an envelope addressed to: Box AF, Commissioner of Patents, Washington, D.C. 20231, on May of March, 2002.

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Docket No. 00600.423US MAR 2 8 TO CHE WD # 431232.wpd

METHODS TO TREAT UNDESIRABLE IMMUNE RESPONSES
Applicant: Bianca M. Conti-Fine
Serial No.: 08/991,143

- 1. (Four times amended) A method of preventing or inhibiting an indication or disease associated with aberrant, pathogenic or undesirable antibody production which is specific for a particular endogenous antigen, comprising: administering to the respiratory tract of a human afflicted with, or at risk of, the indication or disease a dosage form comprising an amount of at least one epitope peptide, wherein the administration of the dosage form is effective to alter the aberrant, pathogenic or undesirable antibody production in humans having divergent HLA haplotypes, wherein the sequence of the epitope peptide comprises a universal, immunodominant epitope, and wherein the peptide comprises less than the sequence of the endogenous antigen.
- 2. (Four times amended) A method of suppressing, tolerizing or inhibiting the priming or activity of CD4⁺ T cells which are associated with antibody production specific for a particular antigen, comprising: administering to the respiratory tract of a mammal afflicted with, or at risk of, the indication or disease a dosage form comprising an amount of at least one epitope peptide, wherein the administration of the dosage form is effective to suppress, tolerize or inhibit the priming or activity of, CD4⁺ T cells which are associated with antibody production, in mammals having divergent immune response haplotypes, wherein the CD4⁺ T cells are specific for the antigen, wherein the sequence of the epitope peptide comprises a universal, immunodominant epitope sequence, and wherein the peptide comprises less than the sequence of the antigen.
- 3. The method of claim 1 wherein the administration is effective to reduce or inhibit the amount of said antibody for an antigen comprising said peptide.

- 4. The method of claim 2 wherein the antigen is an endogenous antigen.
- 5. The method of claim 4 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX
- 6. The method 2 wherein the antigen is an exogenous antigen.
- 7. The method of claim 6 wherein the exogenous antigen is a fungal antigen.
- 8. The method of claim 2 wherein the administration is effective to reduce or inhibit the amount of said antibody for an antigen comprising said peptide.
- 9. The method of claim 8 wherein the antigen is an exogenous antigen.
- 10. The method of claim 9 wherein the exogenous antigen is a fungal antigen.
- 11. The method of claim 8 wherein the antigen is an endogenous antigen.
- 12. The method of claim 11 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX.
- 13. The method of claim 2 wherein the mammal is a human.
- 16. The method of claim 2 wherein the antigen is an exogenous antigen from a domestic cat.

- 17. (Four times amended) A method to tolerize a human to an endogenous antigen associated with aberrant, pathogenic or undesirable antibody production in the human, comprising: administering to the respiratory tract of the human at least one epitope peptide, having a universal immunodominant epitope sequence, wherein the administration is effective to tolerize CD4⁺ cells which are associated with antibody production, in humans having divergent HLA haplotypes to the endogenous antigen and wherein the peptide comprises less than the sequence of the antigen.
- 18. The method of claim 17 wherein the peptide is nasally administered.
- 31. The method of claim 1, 2, or 17 wherein the administration does not increase synthesis of pathogenic antibody to the native antigen.
- 34. The method of claim 1 or 2 wherein the administration is effective to reduce or inhibit the affinity of the antibody for an antigen comprising said peptide.
- 35. The method of claim 34 wherein the antigen is an endogenous antigen.
- 36. The method of claim 35 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX.
- 37. The method of claim 34 wherein the antigen is an exogenous antigen.
- 38. The method of claim 37 wherein the antigen is a fungal antigen.
- 39. The method of claim 1, 2 or 17 further comprising administering an agent that inhibits B cell activation.

- 41. (New) The method of claim 17 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX.
- 42. (New) The method of claim 2 wherein the peptide includes residues 150-169, 181-200 or 360-378 of the *Torpedo californica* acetylcholine receptor alpha subunit or a portion of those residues.
- 43. (New) The method of claim 42 wherein the mammal is a mouse.